

ABSTRACT OF THE INVENTION

A semiconductor device comprising a semiconductor body having a top surface and a first and second laterally opposite sidewalls as formed on an insulating substrate. A gate dielectric is formed on the top surface of the semiconductor body and on the first and second laterally opposite sidewalls of the semiconductor body. A gate electrode is then formed on the gate dielectric on the top surface of the semiconductor body and adjacent to the gate dielectric on the first and second laterally opposite sidewalls of the semiconductor body. The gate electrode comprises a metal film formed directly adjacent to the gate dielectric layer. A pair of source and drain regions are uniformed in the semiconductor body on opposite sides of the gate electrode.